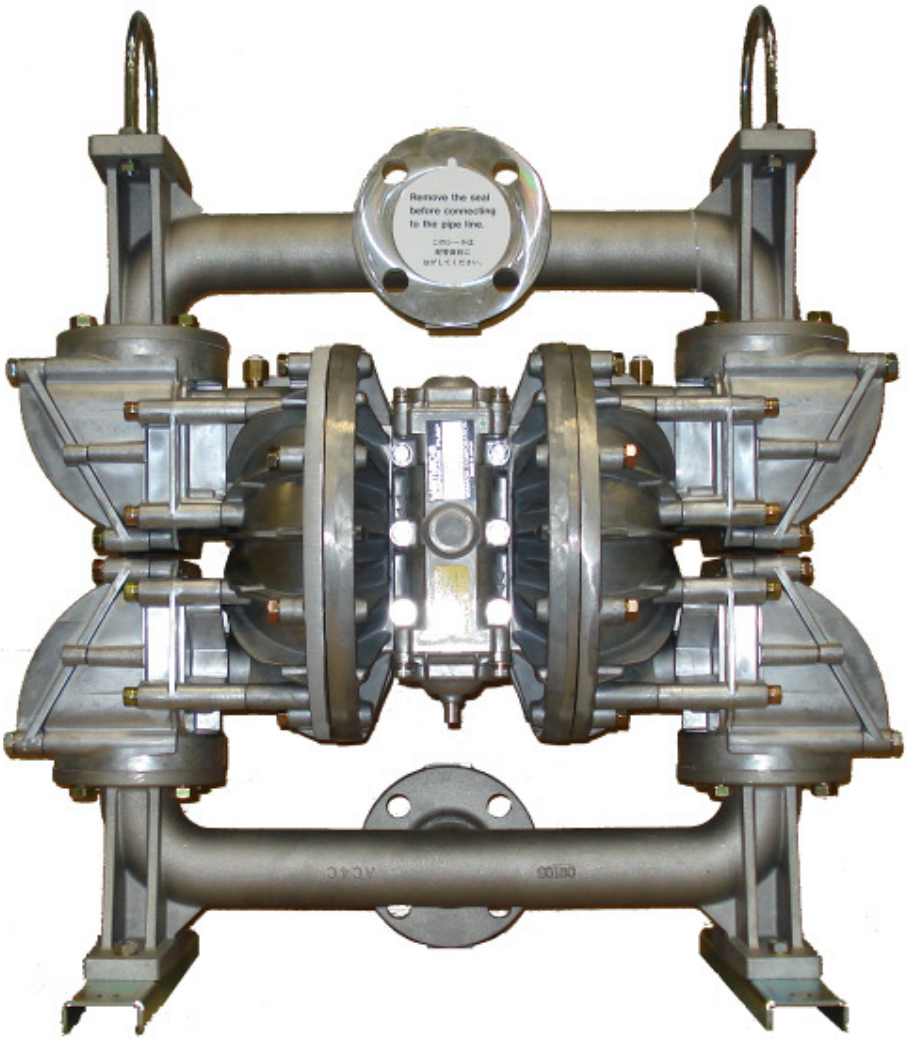
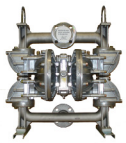
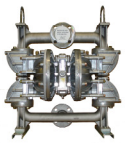
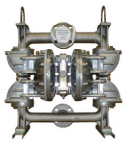
NEW FLAP VALVE PUMP
NDP-50-FAN

The solution for all your fluids with big particles, slurries, etc.
Mining industry, slaughter houses, wine / beer industry are facing already the benefits from this new developed pump with a lot of new features.









New Yamada flap valve Diaphragm pump

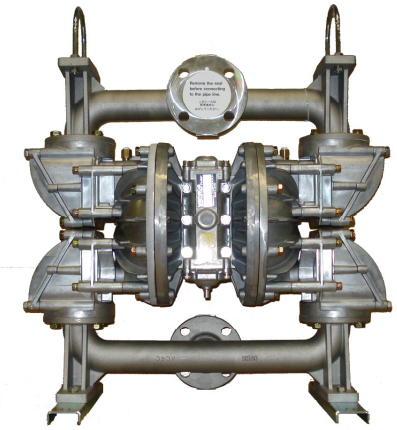
Features:

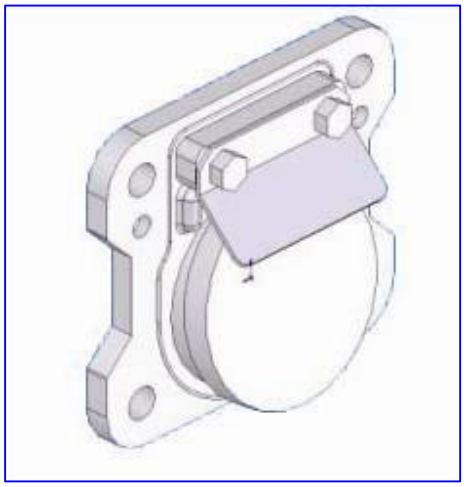
- Simple sturdy Construction
- Easy cleaning, maintenance and service in place.
- Designed and manufactured specifically for fluids with big particles inside like waste waters, slaughter waste and pulp.
- Able to pump fluids with particles up to 30mm
- Inlet on top so that big particles going very easy through the pump as gravity will help.
- Pump repair in place. Easy change of flappers.

Flow and Discharge:

The pump suction inlet is located at the top. The discharge is at the bottom (Reverse from standard AODD pumps)

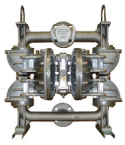
Due to this design, there is less chance of accumulated solids setting inside the pump, and also allows gravity to help move the process fluid / pulps through and out of the pump.

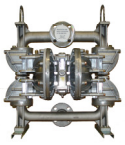


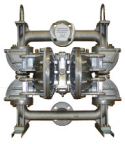


Valve Construction 1:

Unlike the standard Ball Valve type diaphragm pumps, the NDP-50-FAN utilizes a Flap Valve and specialized valve seats with a large aperture to guarantee the passage of large sized solid materials and pulps.

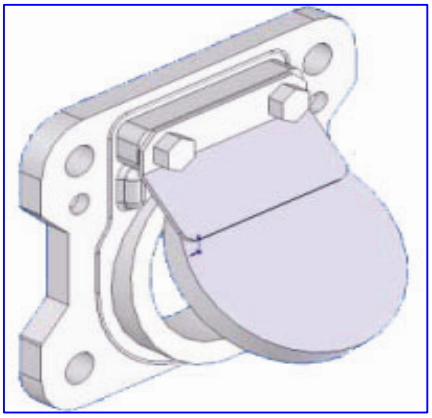






Valve construction 2:

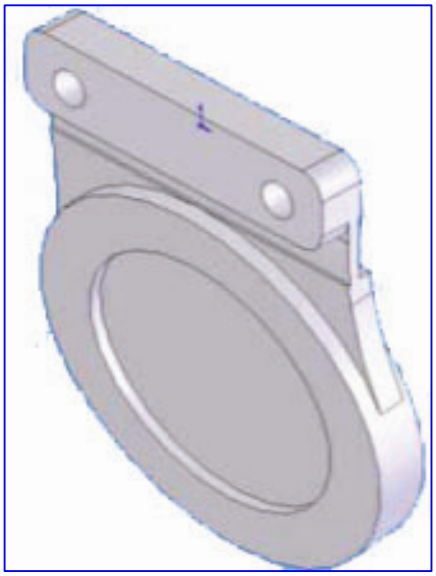
There is no reduction in the flow path Which is usual for a ball type pump. Due to the large open aperture, the valve has an optimum direct flow path and is therefore able to handle large-sized sludge.



Valve materials of construction:

In a Flap valve pump due to the large solids content, usually the valves themselves are the major wearing part and often fail prematurely.

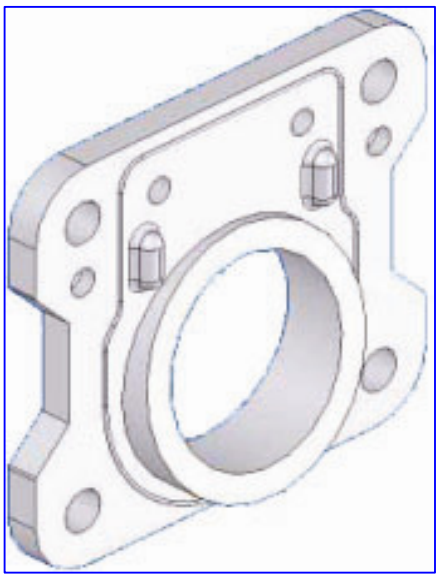
Yamada has carried out extensive testing to produce a new valve that has been designed to offer long operation life and high performance.

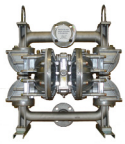


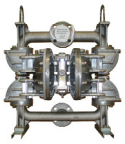
The valve has a metal insert inside a Canvas reinforced NBR rubber. This reduces the chance of failure and stops deformation, cracks and abrasion points. It also is able to create a good seal and high suction pressure.

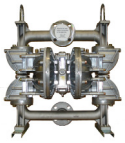
The valve seat utilizes a steel insert covered with NBR rubber. It is designed to reduce the chances of failures due to pressure deformation and has a high resistance to abrasiveness.

It is shaped to provide optimum valve sealing and reduces the chances of solids accumulation around the valve.



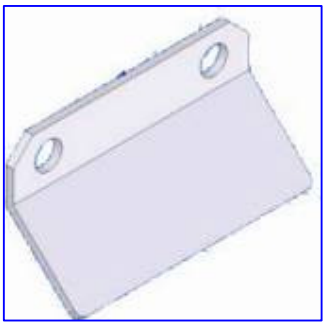


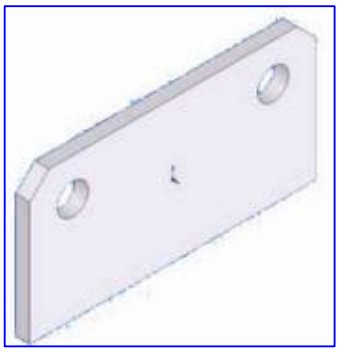




Valve Receiver:

This guide reduces the opening upper limit of the flap valve and reduces the time of opening and closing. It also helps to reduce valve crookedness, and lengthen the life of the other parts.
It helps to provide good valve sealing.

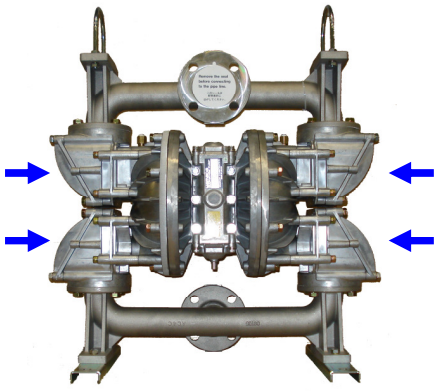


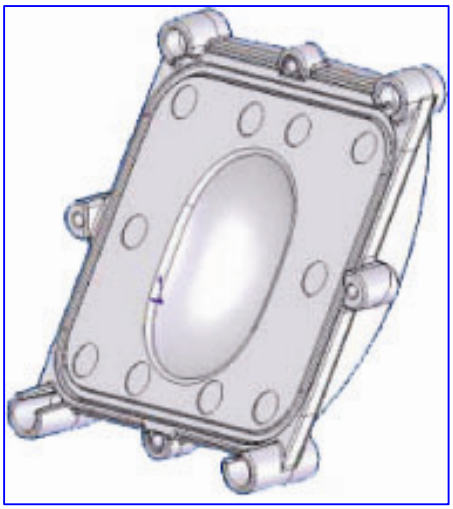


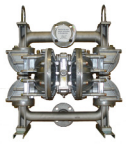
The valve pad improves flow speed and flow efficiency and helps with valve sealing by stabilizing the flap valve.

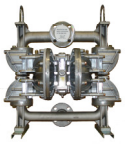
Valve Chamber Cover:

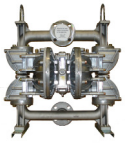
This cover is specifically angled and has an internal diffuser designed to improve flow path efficiency. It also helps to stop the accumulation of solids and helps to prevent abrasion points. These covers are removable and interchangeable.
By removing each individual chamber cover, it is possible to inspect the internal wetted components of the pump, and carry out cleaning or maintenance as required.

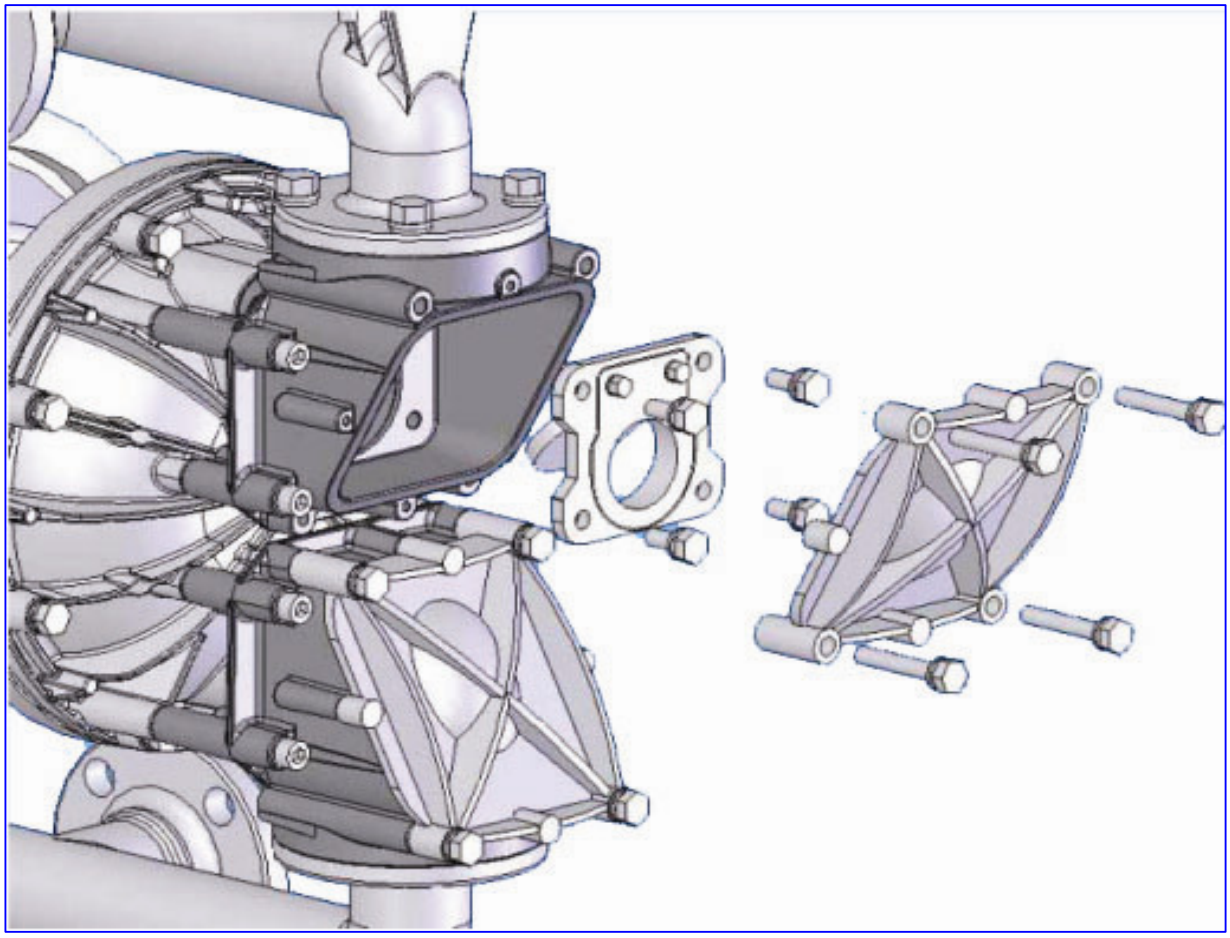










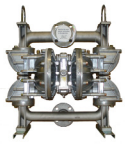
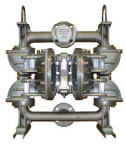
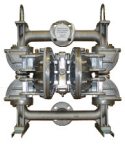


Cleaning, Maintenance and Inspection:

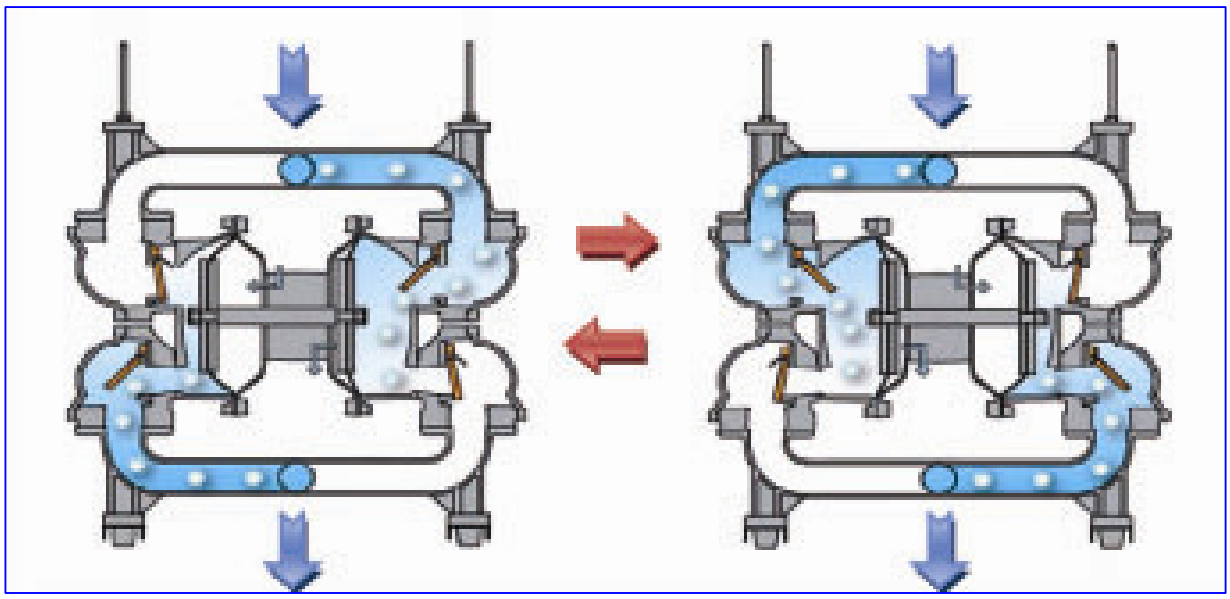
This pump is designed to provide in-place maintenance on the flap valves which are the main wearing part of the pump.
Each valve can be accessed and replaced by hand through the external access covers by simply removing 4 bolts.

By removing a single cover it is also possible to clean the internal components by hand or flush out the inside of the valve and fluid chambers with a hose and water. It is also possible to remove any large wedged or settled solid materials from the inside of the pump without removing the pump from service.

Lastly it is also possible to inspect the inside of the fluid chambers and inspect the diaphragms for abrasion or damage without dismantling the pump.

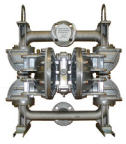
Working principle:

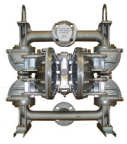


Top suction / bottom-discharge design keeps solids from settling in pump

Basic specifications:

Model	**NDP-50-FAN**
Port size	**2 INCH (50 mm)**
Fluid port dimensions in / out	**NPT 2" FEMALE AND FLANGE**
Air inlet dimension	**NPT ¾"**
Exhaust port dimension	**NPT 1"**
Allowable air pressure	**0,2 – 0,7 MPa / 2Bar – 7Bar**
Maximum discharge pressure	**0,7 MPa / 7Bar**
Volume per cycle	**2,4 LTR**
Maximum discharge volume	**600 LTR / Min**
Suction lift / Self priming	**4 ~ 5 Mtr**
Maximum air consumption	**7000 LTR / Min**
Maximum particle size	**50mm (Soft particles)**
Maximum suitable temperature	**0 - 70ºC**
Maximum noise	**94 dB**
Weight	**52 KG**



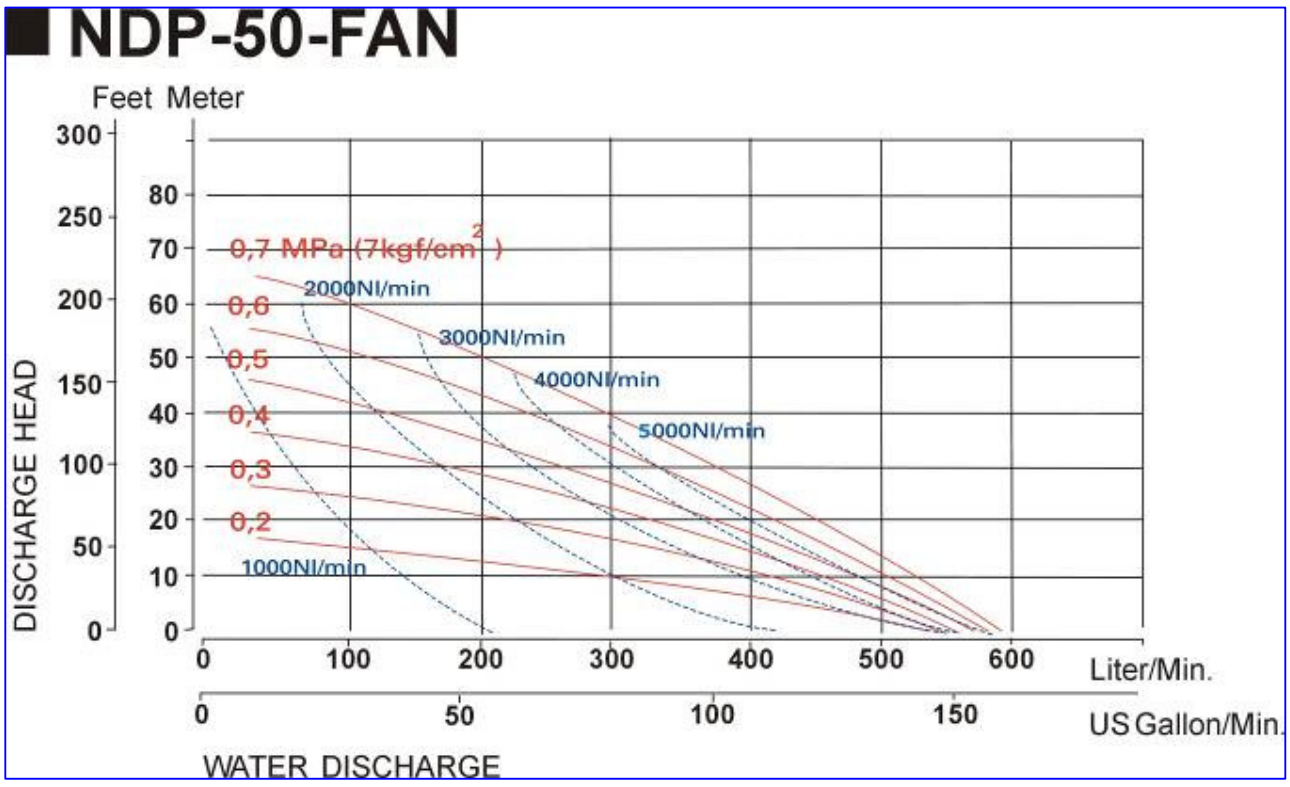


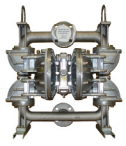
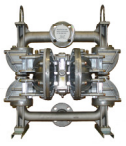
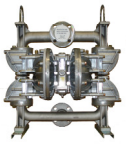
Materials of construction:

Main Body	**ADC12 (Aluminium)**
Liquid side	**ADC12, AC4C-T6 , SUS304, SUS316**
Diaphragms	**NBR**
O-rings / Gaskets	**NBR**
Flap valve	**NBR-* SPCC**
Valve seat	**NBR-* SPHC**
Center disk	**A5056**

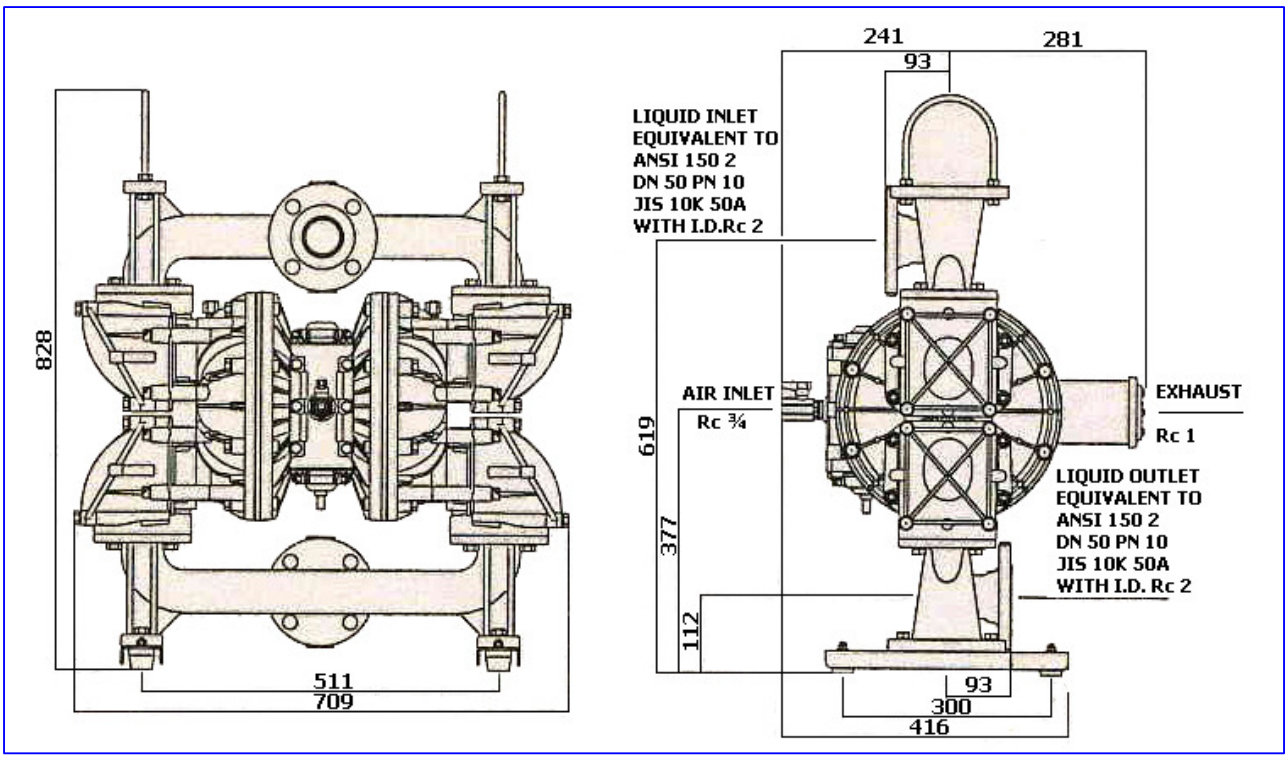
*** Insert material**

Performance Curve :



Dimensional drawing



Yamada Europe BV
Aquamarijnstraat 50
7554 NS Hengelo (o)
The Netherlands

Phone: 0031 (0)74 2422032
Fax: 0031 (0)74-2421055
E-mail: company@yamada.nl
Web: www.yamada-europe.com